APPENDIX E
EDGEWOOD CHEMICAL AND BIOLOGICAL CENTER (ECBC)
HEADSPACE MONITORING PROCEDURES FOR ENVIRONMENTAL SAMPLES
17 NOVEMBER 1998

1. Contractor collects environmental sample. Each sample will always be a minimum of two sub-samples (split sample).

2. Contractor delivers one of the sub-samples to monitoring personnel and retains duplicate split sample in the exclusion zone.

3. Monitoring personnel place up to six samples in a sample box heated to 90 degrees $\pm$ 10 degrees Fahrenheit. Open bags and remove sample jar lids. Close sample box lid and allow samples to equilibrate for 15 minutes (sample box is located within the CRZ).

4. Connect MINICAMS probe to sample port of the heated sample box. Run two complete cycles on the MINICAMS.

a. If MINICAMS reading is below the AEL (clear), go to step 16.

b. If MINICAMS reading is above the AEL (hot) for the agent go to step 5.

5. Don mask and gloves, open sample box and replace lids on sample containers.

6. Connect MINICAMS to sample port of heated sample box, and sample until a clear reading is obtained on the MINICAMS.

7. Don mask and gloves, open lid of sample box. Samples will be monitored one at a time.

8. Remove lid from one sample container. Insert MINICAMS probe. Run one cycle on the MINICAMS. Close the sample jar and repeat this procedure, beginning at step 7, on the next sample. All samples must be monitored to assure the hot samples are located. Segregate the samples giving a hot response into a second hot box located in close proximity to the first hot box in the CRZ.

a. If a hot sample cannot be identified, go to step 9.

b. If a hot sample is identified before all the samples in the hot box have been monitored, ensure next sample is monitored starting from Step 5.

9. Contractor delivers the duplicate of the split sample(s) to monitoring personnel and they are placed in the heated sample box and heated to 90 degrees $\pm$ 10 degrees Fahrenheit. Contractor will take the original sample(s) back to the EZ and secure them, pending results of the monitoring of the second set of samples.

10. Allow samples to equilibrate for 15 minutes.

11. Connect MINICAMS to sample port of heated sample box, and sample until a clear reading is obtained on the MINICAMS.

12. Don mask and gloves, open lid of sample box. Samples will be monitored one at a time.

13. Remove lid from sample container. Insert MINICAMS probe. Run one cycle on the MINICAMS. Close the sample jar and repeat this procedure on the next sample. All samples must be monitored to assure the hot samples are located. Segregate the samples giving a hot response by placing in a second hot box located near the first hot box in the CRZ..

14. Collect DAAMS tubes on the hot samples. Collect tubes at 500 milliliters per minute for 30 minutes. Give tubes to the ECBC personnel for analysis in the RTAP. (MINICAMS **CAN NOT** be used for confirmation sampling).

15. Treat "hot" samples as Investigative Derived Waste (IDW).

16. Give "clear" samples to the contractor for proper disposition. Notify the contractor the split sample(s) is ready for shipment.